

AMENDMENTS TO THE DRAWINGS

The attached new sheet of drawings includes amended Fig. 5 and new Fig. 6.

REMARKS/ARGUMENTS

Claims 1-12 are currently pending. Claim 7 has been amended. In light of the following, all of the claims are in condition for allowance. If after considering this response the Examiner believes that not all of the claims are allowable, the Examiner is requested to schedule a telephone interview with the Applicant's attorney to further the prosecution of this application.

Objection to the drawings

Amended Fig. 5 shows conductive layers 12 and 13 separated by a dielectric 100. Fig. 5 does not enter any new matter as this feature can be drawn directly from paragraphs 18 and 37 in addition to paragraphs 38 and 39 of the present application.

New Fig. 6 shows the realization of the capacitor C located in the center of the spirals of the first sections 6'. Fig. 6 does not enter any new matter as it can be drawn directly from paragraphs 17 and 40 of the present application.

Rejection of claims 1-6 under 35 U.S.C. § 112, second paragraph

The Examiner only addresses claims 1 and 4 in the Office Action. As a result, the Applicant's attorney can only assume that claims 9-12 have been removed from this rejection.

Regarding claim 1, the central frequency of the transformer is the central frequency of the bandwidth of the transformer. The bandwidth is the frequency range of the transformer.

Regarding claim 4, new Fig. 6 has been added to overcome this rejection.

Rejection of claims 1 and 6-10 under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Ross (US 3,836,852)

Claim 1

Claim 1 recites a mode-switching transformer comprising a first line in common mode and a second line in differential mode, wherein the common mode line is connected in series with a capacitor to lower a central frequency of a bandwidth of the transformer.

For example, referring, e.g., to FIG. 3 and paragraphs 26-30 of the present application, a mode-switching transformer 10 comprises a first line (sections 5' and 6') in common mode and a second line (sections 7' and 8' and junction point 9) in differential mode, wherein the common mode line is connected in series with a capacitor C. Because the capacitor C lowers the central frequency of the bandwidth of the transformer, the sections 5', 6', 7', 8' may be sized for higher operating frequencies.

As a result, the sections 5', 6', 7', 8' may be shorter in length, and thus, the size of the transformer and the insertion losses may be reduced.

Ross, on the other hand, does not disclose a mode-switching transformer comprising a first line in common mode and a second line in differential mode, wherein the common mode line is connected in series with a capacitor to lower a central frequency of a bandwidth of the transformer. The Examiner continues to argue on page 4 of the Office Action that Ross discloses a differential mode winding structure 147 (Fig. 15). However, the Applicant's attorney must continue to point out that Ross does not disclose a transformer having common mode and differential mode winding structures. By definition, a differential mode winding structure requires two terminals and one intermediate reference terminal to provide respective positive and negative voltages with respect to this reference. In the present application, the differential mode winding structure includes two terminals 2, 3 and one reference terminal 9. However, no such structure is disclosed anywhere in Ross. Furthermore, Ross teaches only to add both a transistor 152 and a capacitor 153 (col. 11, line 42) to convert the unidirectional voltage provided by battery 141 (col. 11, lines 40-45) into an AC voltage at terminal 154. This has nothing to do with lowering a central frequency of a bandwidth of the transformer. In fact, after reviewing Ross in its entirety, the Applicant's attorney is unable to find any mention of lowering the frequency of the transformer bandwidth. Therefore, not only is there no motivation to combine the teachings of Ross with the Applicant's admitted prior

art (AAPA), but the combination would not even lead to the invention as recited in claim 1.

Claim 7

Claim 7, as amended, recites a differential mode winding electromagnetically coupled with a common mode winding, and only one capacitor electrically coupled to the common-mode winding.

Claim 7 is patentable for reasons similar to those recited above in support of the patentability of claim 1. As discussed above, Ross teaches only to add both a transistor 152 and a capacitor 153 (col. 11, line 42) to convert the unidirectional voltage provided by battery 141 (col. 11, lines 40-45) into an AC voltage at terminal 154. After reviewing Ross in its entirety, the Applicant's attorney is unable to find any mention of only one capacitor electrically coupled to the common-mode winding. Therefore, combining the teachings of Ross with AAPA would not satisfy the limitations of claim 7.

Claims 6 and 8-10

Claims 6 and 8-10 are patentable by virtue of their respective dependencies from independent claims 1 and 7.

CONCLUSION

In view of the foregoing, claims 1-12 are in condition for allowance, and that action is respectfully requested.

In the event additional fees are due as a result of this amendment, you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

If, after considering this response, the Examiner does not agree that all of the claims are allowable, then it is respectfully requested that the Examiner contact the Applicant's attorney at (425) 455-5575.

Respectfully submitted,

GRAYBEAL JACKSON HALEY LLP



J. Mark Han
Registration No. 57,898
Attorneys for Applicant
155 – 108th Avenue NE, Suite 350
Bellevue, WA 98004-5973
(425) 455-5575 Phone
(425) 455-5575 Fax



2/2

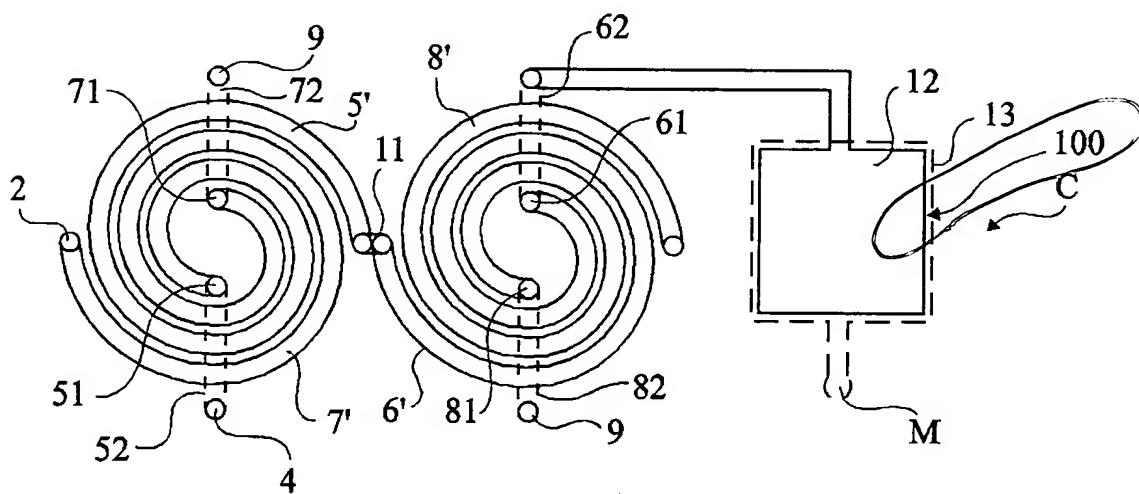


Fig 5

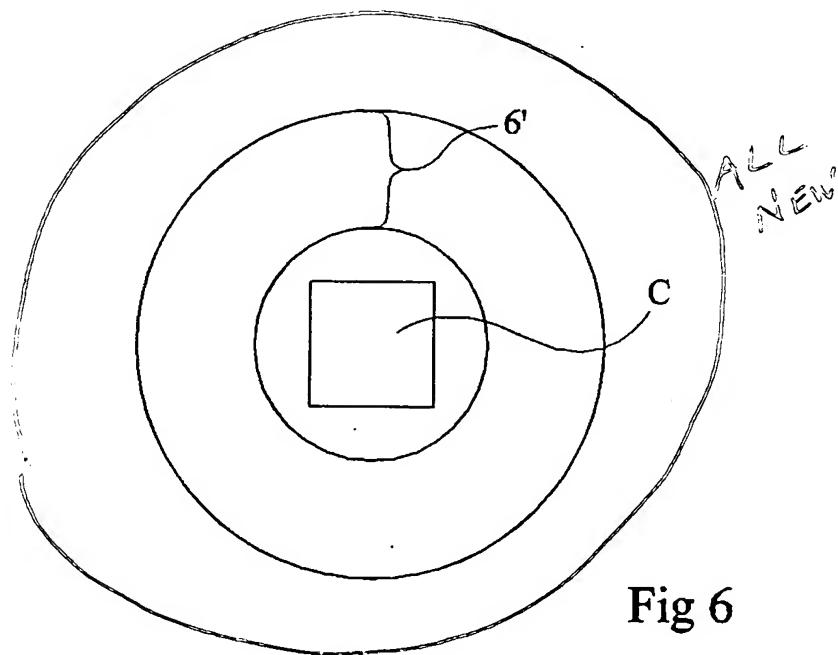


Fig 6